What is claimed is:

1. A universal primer set for amplification of a target DNA sequence associated with pathogenic strains of fungi, said primer set having the following sequences: GGAAGTAAAAGTCGTAACAAGG (SEQ ID NO: 1) and GTATCCCTACCTGATCCGAGG) (SEQ ID NO: 2).

Sub D2

2. A method of determining whether one or more fungal species selected from the group of fungal species consisting of *Aspergillus ustus, Aspergillus terreus, Aspergillus niger, Aspergillus fumigatus, Aspergillus flavus, Pseudallescheria boydii, Fusarium solani, Fusarium oxysporum, Fusarium monilliformes, Penicillium spp., Malassezia furfur, Malbarnchia spp., Cylindrocarpon lichenicola, Cladophialophora bantiana, Arthrogrothilus spp., Gymnascella hyalinaspora, Cylindrocarpon destructans, Sporothrix schenkii, Blastomyces dermatitides, Penicillium marnefeii, Histoplasma duboisii, Histoplasma capsulatum, Coccidiodes immitis, Cryptococcus neoformans, Issatchenkia orientalis, Candida albicans, Candida tropicalis, Candida lusitaniae, Candida glabrata, and Candida parapsilosis,* is present in a sample of fungi, said method comprising the following steps:

a) extracting nucleic acid material from fungi contained in said sample;

b) adding two known oligonucleocide primers, one of said primers being (SEQ ID NO:1) and the other primer being (SEQ ID NO:2), said primers bracketing a hypervariable region on the rRNA present in the fungal species of said group;

c) amplifying the sequence between said primers; and

d) using one or more detectably labeled probes directed to a portion of the hypervariable region bracketed by said primers, each said labeled probe being specific for one of

said fungal species from said group, to determine whether said fungal species identified by each said labeled probe is present in said sample.

3. The method of claim 1 in which, in said amplifying step, said amplifying procedure is the polymerase chain reaction.

4. The method of claim 1 in which said one or more probes is selected from the group consisting of (SEQ ID NO:3), (SEQ ID NO:4), (SEQ ID NO:5), (SEQ ID NO:6), (SEQ ID NO:7), (SEQ ID NO:8), (SEQ ID NO:9), (SEQ ID NO:10), (SEQ ID NO:11), (SEQ ID NO:12), (SEQ ID NO:13), (SEQ ID NO:14), (SEQ ID NO:15), (SEQ ID NO:16), (SEQ ID NO:17), (SEQ ID NO:18), (SEQ ID NO:19), (SEQ ID NO:20), (SEQ ID NO:21), (SEQ ID NO:22) and (SEQ ID NO:23), (SEQ ID NO: 24),(SEQ ID NO:25),(SEQ ID NO:26),(SEQ ID NO:27),(SEQ ID NO:28), (SEQ ID NO:29),(SEQ ID NO:30), and (SEQ ID NO:31), (SEQ ID NO:32), (SEQ ID NO:33).

5. The method of claim 1 wherein, in step (d), more than one probe is used, each said probe being connected to (a) a different signal moiety or (b) a moiety which allows separation of said probes.

6. An oligonucleotide sequence specific for *Penicillium spp.*, having the nucleotide sequence of (SEQ ID NO:25) or the complement thereof.

7. An oligonucleotide sequence specific for *Malbranchia spp.*, having the sequence of (SEQ ID NO:26) or the complement thereof.

8. An oligonucleotide sequence specific for

Arthorgrothilus spp., having the sequence of (SEQ ID NO:27) or the complement thereof.

9. An oligonucleotide sequence specific for *Cylindrocarpon destructans*, having the sequence of (SEQ ID NO:28) or the complement thereof.

10. An oligonucleotide sequence specific for *Sporothrix schenkii*, having the sequence of (SEQ ID NO:29) or the complement thereof.

11. An oligonucleotide sequence specific for *Penicillium marnefeii*, having the sequence of (SEQ ID NO:30) or the complement thereof.

12. An oligonucleotide sequence specific for *Coccidiodes immitis*, having the sequence of (SEQ ID NO:31) or the complement thereof.

13. An oligonucleotide sequence specific for *Candida tropicalis*, having the sequence (SEQ ID NO:32) or the complement thereof.

14. An oligonucleotide sequence specific for *Candida parapsilosis*, having the sequence of (SEQ ID NO:33) or the complement thereof.

15. A kit for identifying pathogenic fungal species in a biological sample, said kit comprising:

a) a universal primer set, said primer set having the sequence of SEQ ID NO: 1 and SEQ ID NO: 2;

b) lysis buffer suitable for lysing fungus in

said biological sample, such that DNA is released from said fungus upon exposure to said buffer;

c) a polymerase enzyme suitable for use in polymerase chain reaction;

d) means for contacting said released DNA with a primer set having the sequence of SEQ ID NO: 1 and NO: 2 under conditions where amplification of pathogenicity-associated ITS sequences occurs, if said pathogenic fungus is present in said sample; and

e) means for detecting said amplified sequence, if present.

16. A kit as claimed in claim 15, wherein said amplified sequence is detected via incorporation of a detectable label.

17. A kit as claimed in claim 15, wherein said amplified sequence is detected by gel electrophoresis of said amplified sample.

18. A kit as claimed in claim 14, wherein said amplified sequence is compared to a sequence selected from the group consisting of SEQ ID NOS: 3-33, thereby identifying said pathogenic fungus if present.

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